

Amendments to the Claims

This listing of claims will replace all prior versions and listings of claims in the Application.

Listing of Claims

1-48. (Canceled)

49. (Currently Amended) The method of claim 48 54, wherein the metal is silver.

50. (Currently Amended) The method of claim 48 54, further comprising roll milling the mixture to produce a homogeneous composition.

51. (Currently Amended) The method of claim 48 54, wherein the ~~metal~~ metallic nanoparticles are present in an amount of from 10 to 80% by weight.

52. (Currently Amended) The method of claim 48 54, wherein the cure temperature lowering agent is present in an amount of from 0.5 to 8% by weight.

53. (Currently Amended) The method of claim 48 54, wherein the nanoparticles have an average size of from 40 to 100 nm.

54. (Currently Amended) ~~The method of claim 48;~~ A method for preparing a solid pure metal conductor on a substrate comprising the steps of

- (a) mixing a reactive organic medium comprising organic coated metallic nanoparticles, a metal powder, and a cure temperature lowering agent;
- (b) applying the mixture formed in step (a) onto the substrate; and
- (c) heating the substrate at a critical temperature less than 200°C for a time

less than about 30 minutes;

further comprising mixing a metal flake with the reactive organic medium and the cure temperature lowering agent and wherein the applied mixture is converted into a consolidated pure metal conductor.

55. (Original) The method of claim 54, wherein the metal flake is silver.

56. (Original) The method of claim 54, wherein the metal flake is present in an amount of from 10 to 60% by weight.

57. (Original) The method of claim 54, wherein the metal flake has an average particle size of from 3 to 12 μm .

58. (Currently Amended) The method of claim 48 54, wherein the mixture is applied by printing.

59. (Original) The method of claim 58, wherein the printing technique is selected from screen printing, rotary screen printing, gravure printing, intaglio printing, flexographic printing, letterpress printing, lithographic printing, ink jet printing or electrostatic printing.

60. (Currently Amended) The method of claim 48 54, wherein the temperature is between 120°C and 150°C.

61. (Currently Amended) ~~The method of claim 48;~~ A method for preparing a solid pure metal conductor on a substrate comprising the steps of

- (a) mixing a reactive organic medium comprising organic coated metallic nanoparticles, a metal powder, and a cure temperature lowering agent;
- (b) applying the mixture formed in step (a) onto the substrate; and
- (c) heating the substrate at a critical temperature less than 200°C for a time

less than about 30 minutes;

wherein the applied mixture is converted into a consolidated pure metal conductor and
wherein the cure temperature lowering agent is a polymer selected from polyvinylidene chloride, polyvinyl chloride, polyethylene vinyl chloride, or copolymers thereof.

62. (Currently Amended) The method of claim 48 54, wherein the substrate is selected from polyester, polyimide, epoxy or paper.

63. (New) The method of claim 61, wherein the metal is silver.

64. (New) The method of claim 61, further comprising roll milling the mixture to produce a homogeneous composition.

65. (New) The method of claim 61, wherein the metallic nanoparticles are present in an amount of from 10 to 80% by weight.

66. (New) The method of claim 61, wherein the cure temperature lowering agent is present in an amount of from 0.5 to 8% by weight.

67. (New) The method of claim 61, wherein the nanoparticles have an average size of from 40 to 100 nm.

68. (New) The method of claim 61, further comprising mixing a metal flake with the reactive organic medium and the cure temperature lowering agent.

69. (New) The method of claim 61, wherein the metal flake is silver.

70. (New) The method of claim 61, wherein the metal flake is present in an amount of from 10 to 60% by weight.

71. (New) The method of claim 61, wherein the metal flake has an average particle size of from 3 to 12 μm .

72. (New) The method of claim 61, wherein the mixture is applied by printing.

73. (New) The method of claim 72, wherein the printing technique is selected from screen printing, rotary screen printing, gravure printing, intaglio printing, flexographic printing, letterpress printing, lithographic printing, ink jet printing or electrostatic printing.

74. (New) The method of claim 61, wherein the temperature is between 120°C and 150°C.

75. (New) The method of claim 61, wherein the substrate is selected from polyester, polyimide, epoxy or paper.